[illegible]

[illegible]

[illegible]

[illegible] **56** [illegible] ___ [illegible] ___ [illegible] ⅡA

[illegible] （ ） **B**

A [illegible]

B [illegible]

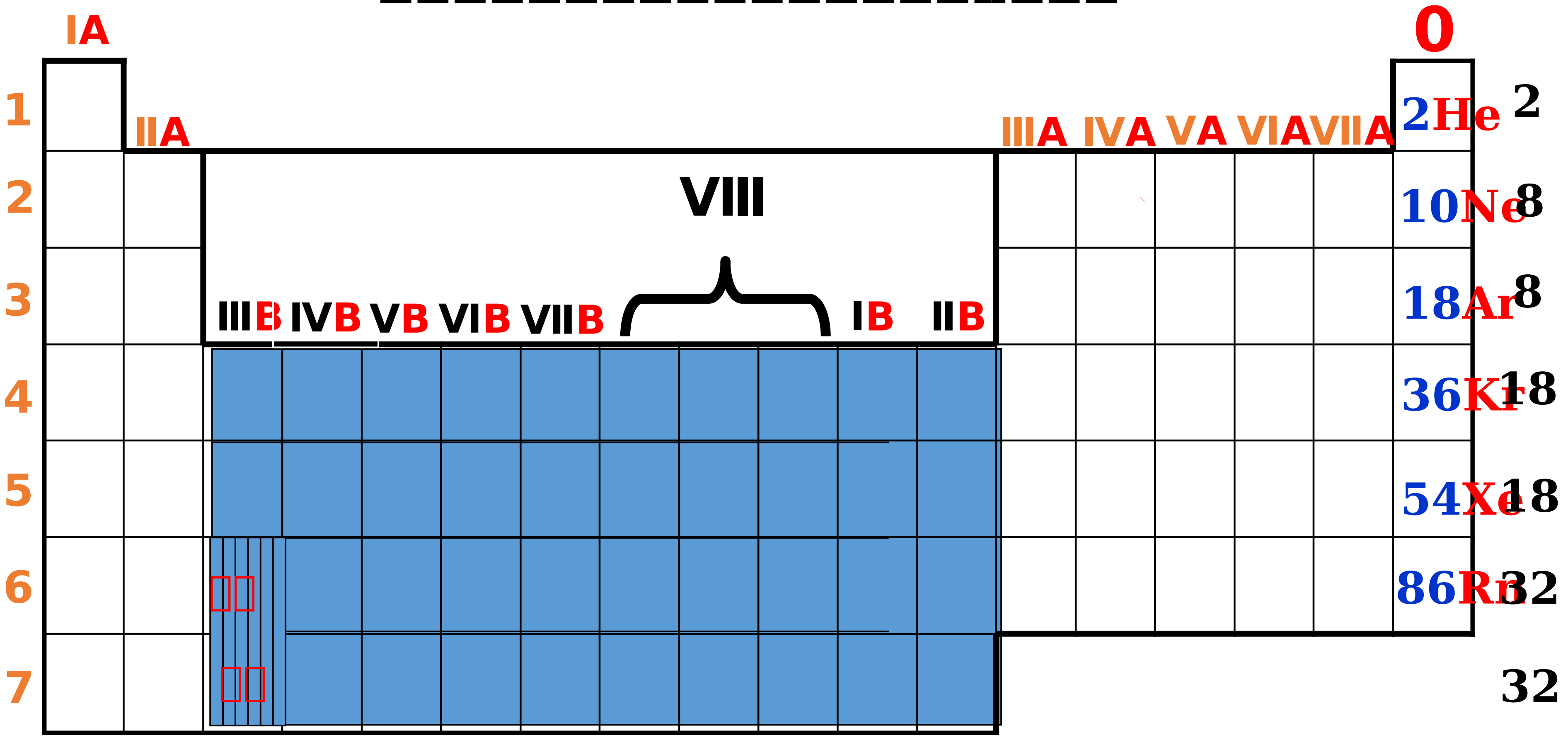
C [illegible]

[illegible]

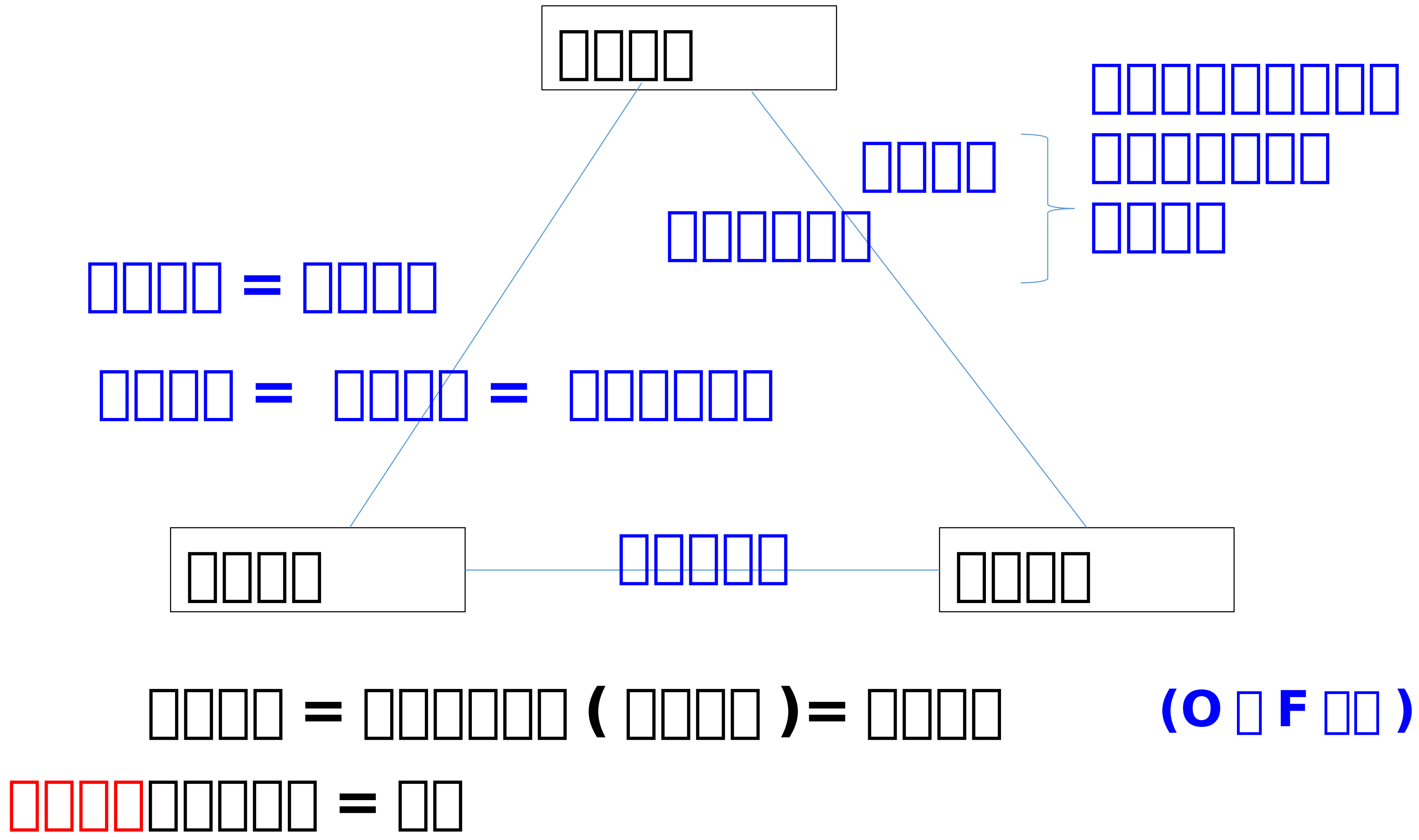
[[illegible]]

① [illegible]

② [illegible]



ⅠA
ⅡA
ⅢA ⅣA ⅤA ⅥA ⅦA
0
Ⅷ
ⅢB ⅣB ⅤB ⅥB ⅦB
ⅠB ⅡB
1
2
3
4
5
6
7
2He 2
10Ne 8
18Ar 8
36Kr 18
54Xe 18
86Rn 32
32



1 [illegible]

① [illegible], [illegible], [illegible] ([illegible]) [illegible]

________, [illegible] [illegible] ___, [illegible] ns^1

____________, [illegible] [illegible] He [illegible] $1s^2$ [illegible], [illegible]

________.____ ns^2np^6

② [illegible] [illegible] ______.

③ [illegible]“[illegible]”[illegible]“[illegible]”[illegible]

[illegible] = [illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2	1*s*	**2**
[illegible]	8	2*s* 2*p*	8
[illegible]	8	3*s* 3*p*	8
[illegible]	18	4*s* 3*d* 4*p*	18
[illegible]	18	5*s* 4*d* 5*p*	18
[illegible]	32	6*s* 4*f* 5*d* 6*p*	32
[illegible]	32	7*s* 5*f* 6*d* 7*p*	32

2 [illegible]

[illegible]“[illegible]”[illegible]“[illegible]”[illegible]

[illegible],

[illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible] = [illegible] = [illegible]

[illegible]

[illegible][illegible] = [illegible]**n-1)d + ns** [illegible] = [illegible]

[illegible]:[illegible]25[illegible]

[illegible]

[illegible]$3d^54s^2$[illegible]

[illegible]4[illegible]7[illegible]

[illegible]ⅦB[illegible]

[illegible]

[illegible] 5 [illegible] s [illegible] d [illegible] ds [illegible] p [illegible] f [illegible]

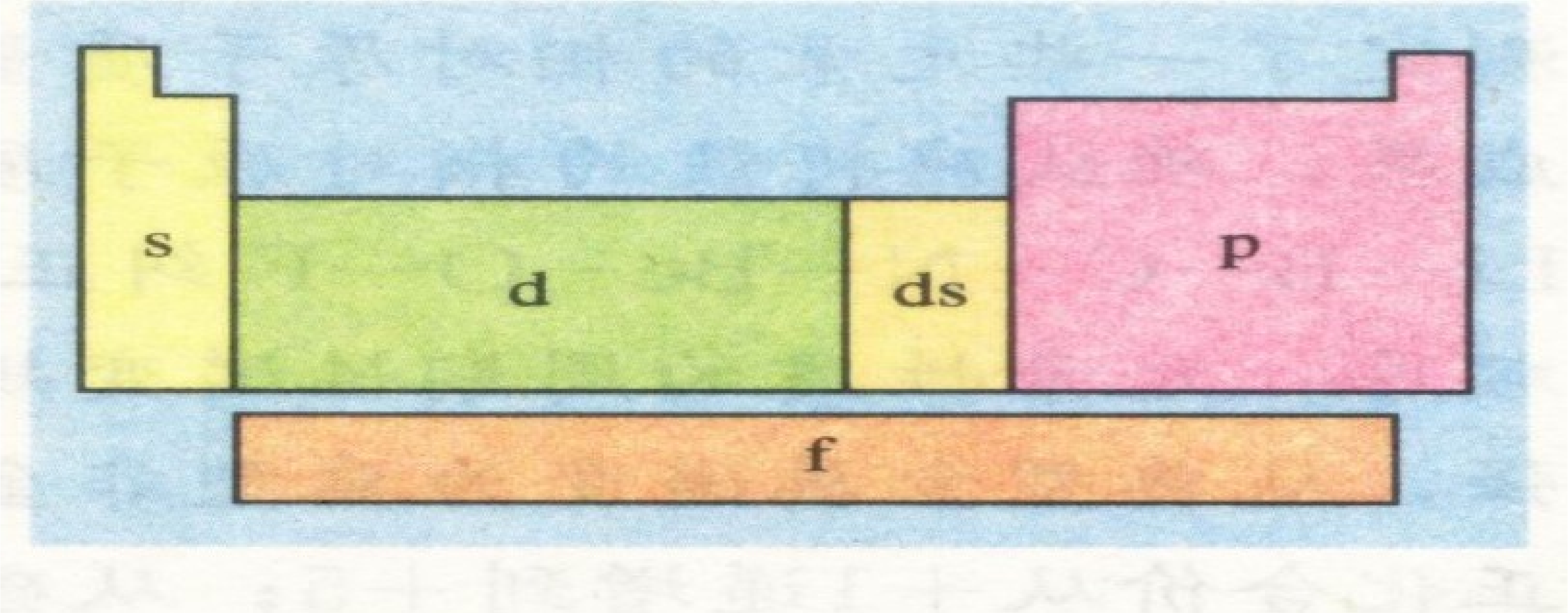


图 1-16 元素周期表分区的简图

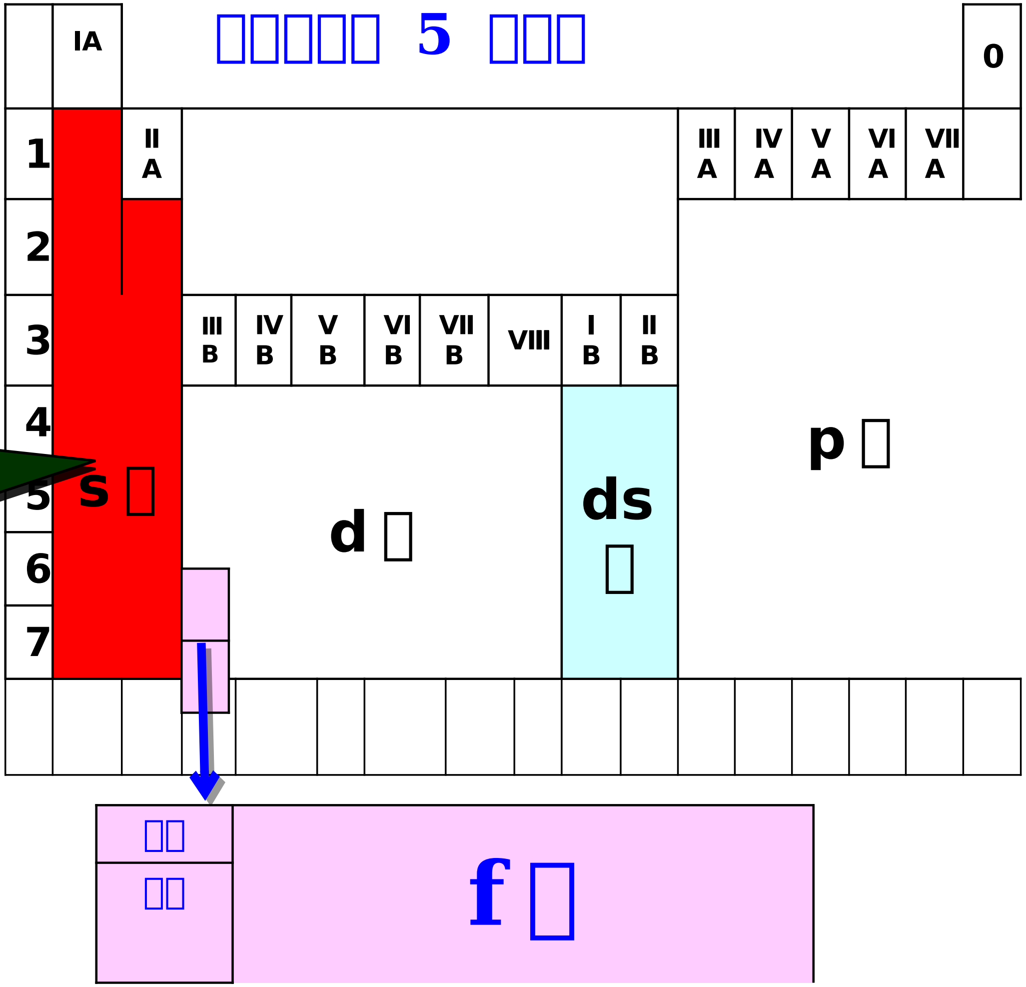
s [illegible] p [illegible] d [illegible] f [illegible]

ds [illegible] (n-1)d [illegible] ns [illegible]

□□□□□□□□□□

□□□□

1□s□



IA □ Ⅱ A □□□□□

□□□□□ ns^{1}□^{2} (n≥1)

□□

① □□□□□ ns^{1}□^{2} □□□□□ S □□ He($1s^{2}$ p□)

② □ H □□□□□□□□

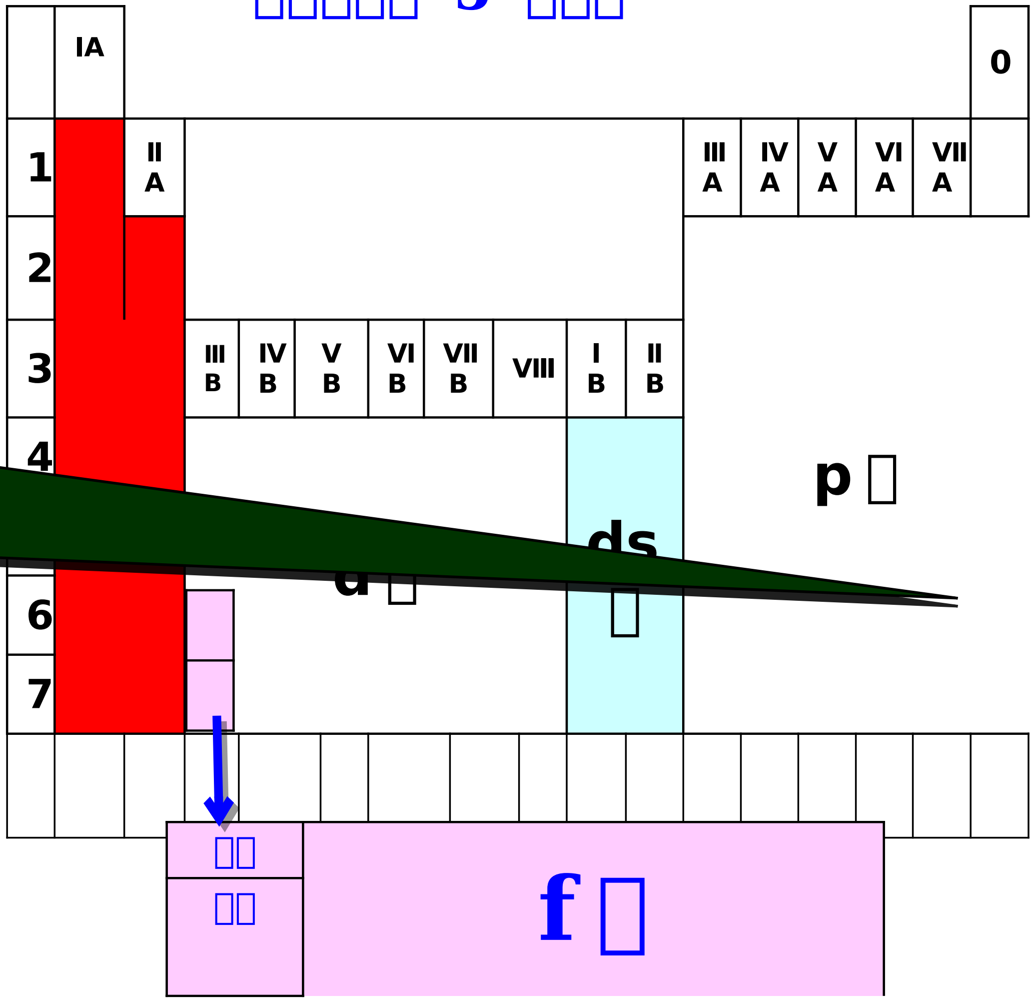
2 p

ⅢA ⅦA

:

$ns^2\ np^{1-6}(n\geq2)$

5

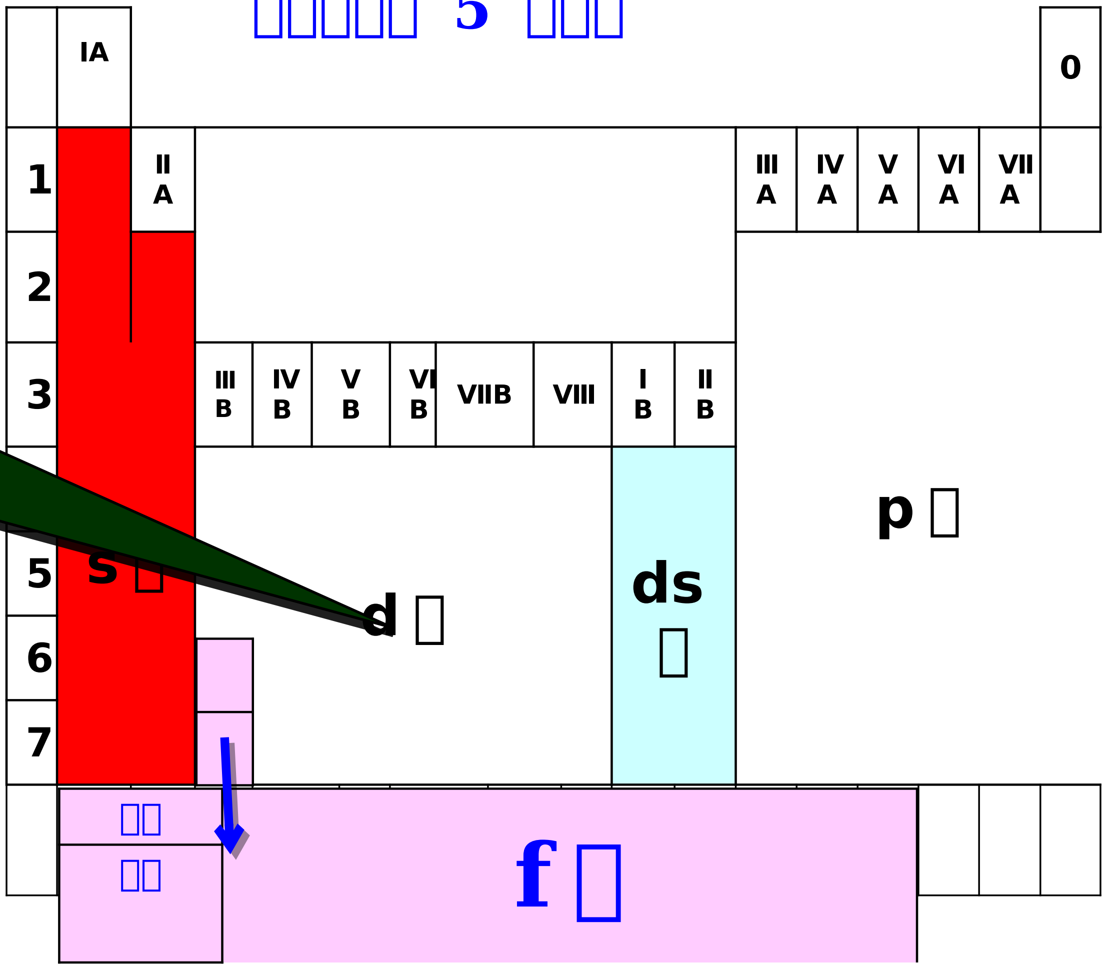


①He p p

②

3 d

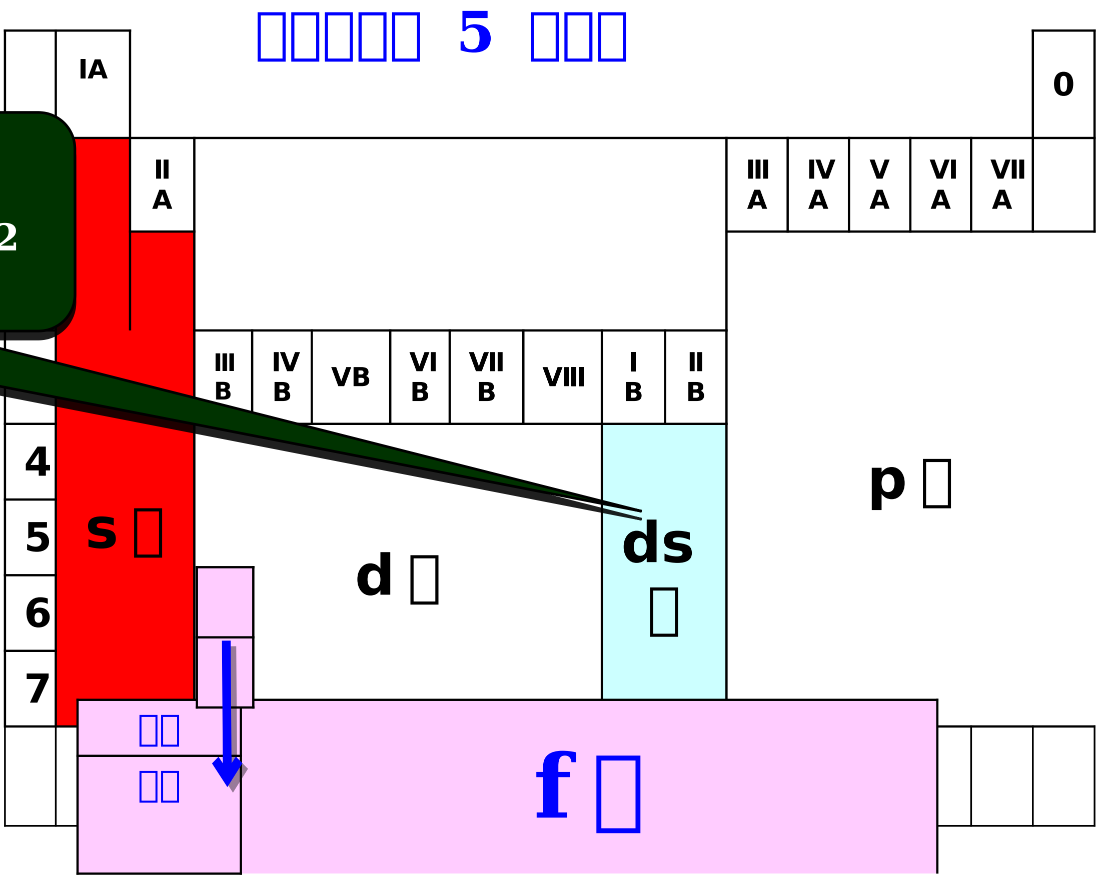
IIIB VII B VIII
( )
: $(n-1)d^{1-9}ns^{1-2}$



4 ds

IB Ⅱ B

$(n-1)d^{10}ns^{1 \sim 2}$



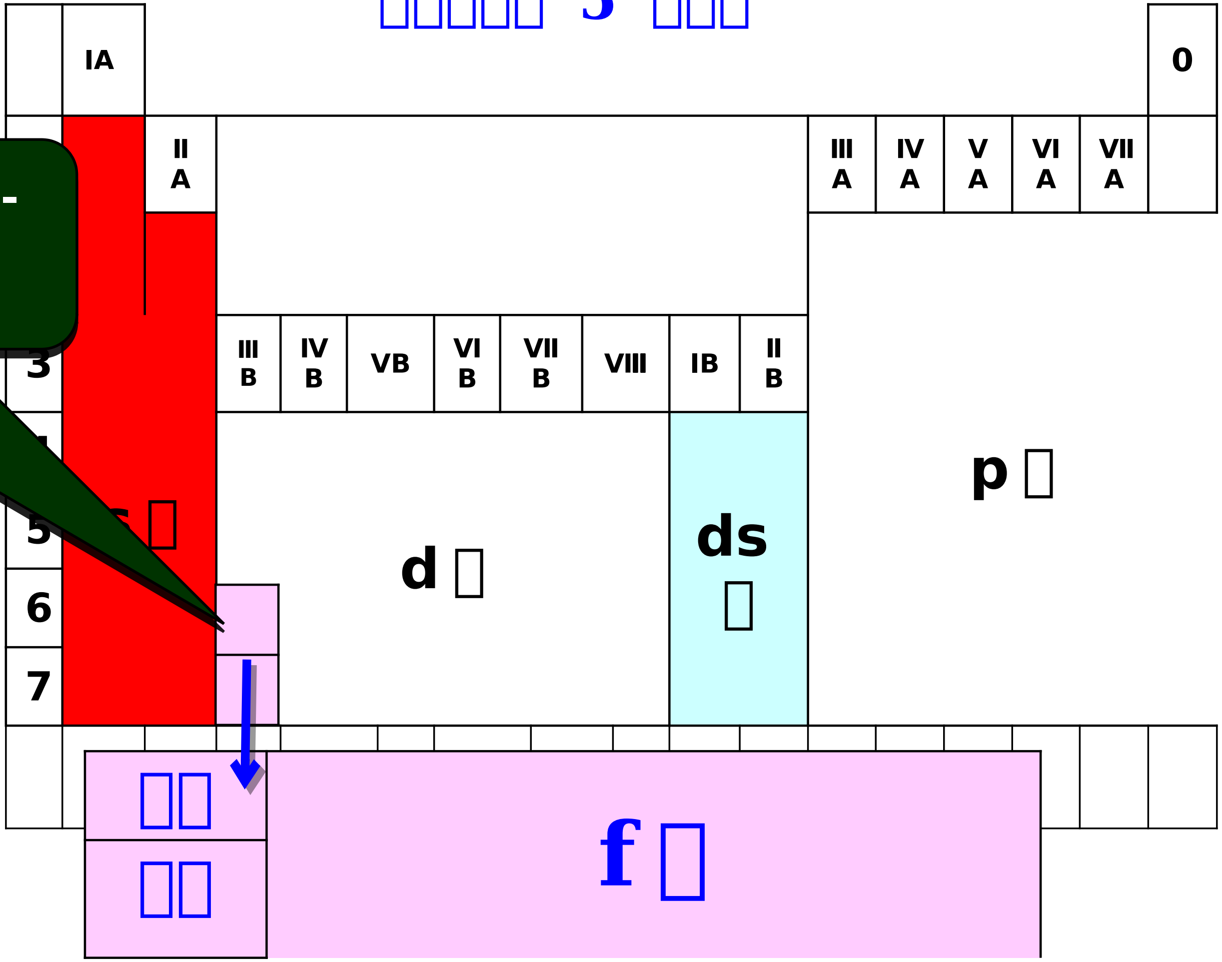
①

=

② d

5 f

$(n-2)f^{0-14}(n-1)d^{0-2}ns^2$



□□□□□□□

	□□□□	□□□□□	□□□□
s □	ⅠA □Ⅱ A □	ns^1 □ ns^2	□□□□
p □	ⅢA □□□	$ns^2np^{1\square6}$	□□□□□□
d □	ⅢB □Ⅷ□	$(n$ □ $1)d^{1\square8}ns^2$	□□□□
ds □	ⅠB □Ⅱ B □	$(n$ □ $1)d^{10}ns^{1\square2}$	□□□□
f □	□□□□□	□ n □ 2 □ $f^{0\square14}ns^2$ □ $(n-2)f^{0\square14}(n-1)d^{0\square2}ns^2$	□□□□

□□□□□□s□(□H□)□d□□ds□□□□□□□□(□H□)□

s□(□H□) □d□□ds□□□□□□□□□□□1-2□□□□□□□□□□□□□□□□□□□

□□□□□

1 □□□□□□□□□□□□□□ $3d^24s^2$ □□□□□□□□□□□□□□

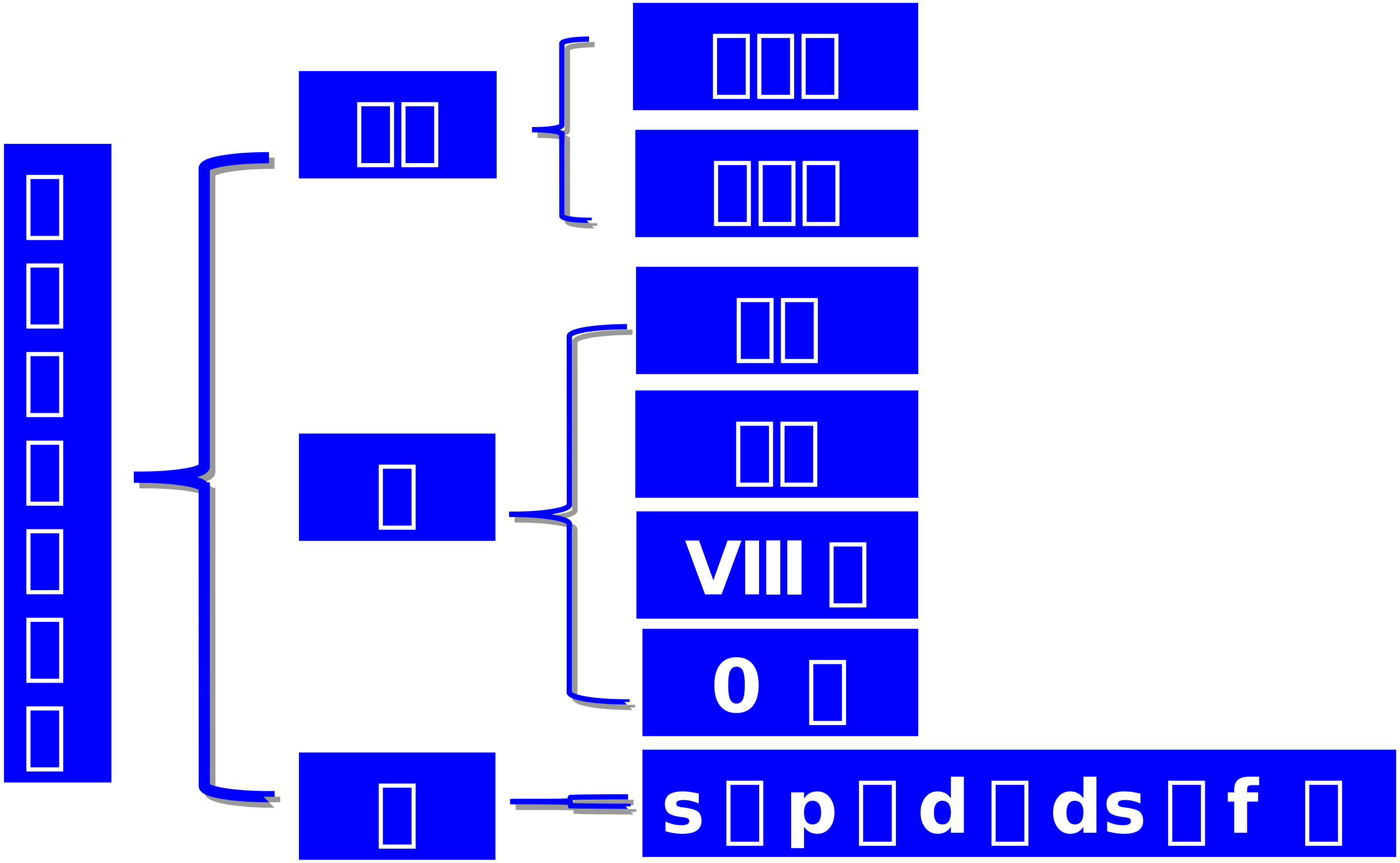
□□□□□ **IVB** □□

2 □□□ $M^{2□}$□ 3d □□□□ 6 □□□□□□□□

(1)M □□□□□□□□□ $1s^22s^22p^63s^23p^63d^64s^2$

(2)M □□□□□□□□□□□□□ **2**

(3)M □□□□□□□□□□□ □□□□□□**VIII**□


VIII
0
s p d ds f

[illegible]

1. [illegible]

（**1**[illegible]

① [illegible] [illegible]

② [illegible] [illegible]

③ [illegible]

（**2**[illegible]

[illegible]

[illegible]

[illegible]

[illegible]3[illegible]/[illegible]

① [illegible] [illegible]

② [illegible]

[illegible]

[illegible]

Na^+ [illegible] Mg^{2+} [illegible] Al^{3+} [illegible] P^{3-} [illegible] S^{2-} [illegible] Cl^-

$P^{3-} > S^{2-} > Cl^-$ > $Na^+ > Mg^{2+} > Al^{3+}$

③ [illegible]

[illegible]: $Cl < Cl^-$ $Fe > Fe^{2+} > Fe^{3+}$

2. [illegible]

[illegible]

[illegible] = [illegible]

[illegible] + |[illegible]| = 8 [illegible] H [illegible] 2 [illegible]

[illegible] ① [illegible]

② O [illegible] F [illegible]:

[illegible]

3. □□□□□□□□

□□□ { □□□—□□□□□□□□□□□□ ; □□□□—□□□□□□□□□□□□

□□□□□□□X□Y□Z□□□□□□□□□□□□□□

XH_3□H_2Y□HZ□□□□□□□□□□B □

A. □□□□ Z□Y□X

B. Z□□□□□□□

C. □□□XH_3□H_2Y□HZ

D. □□□□□□□□□□□H_3XO_4□□□□□

知识回顾

[illegible] 1 [illegible] :

① [illegible]

② [illegible]

③ [illegible]

知识回顾

[illegible] 2 [illegible] :

① [illegible] H_2 [illegible] [illegible] , [illegible]

② [illegible]

③ [illegible]

[illegible]

4. [illegible]

[illegible] 1 [illegible]

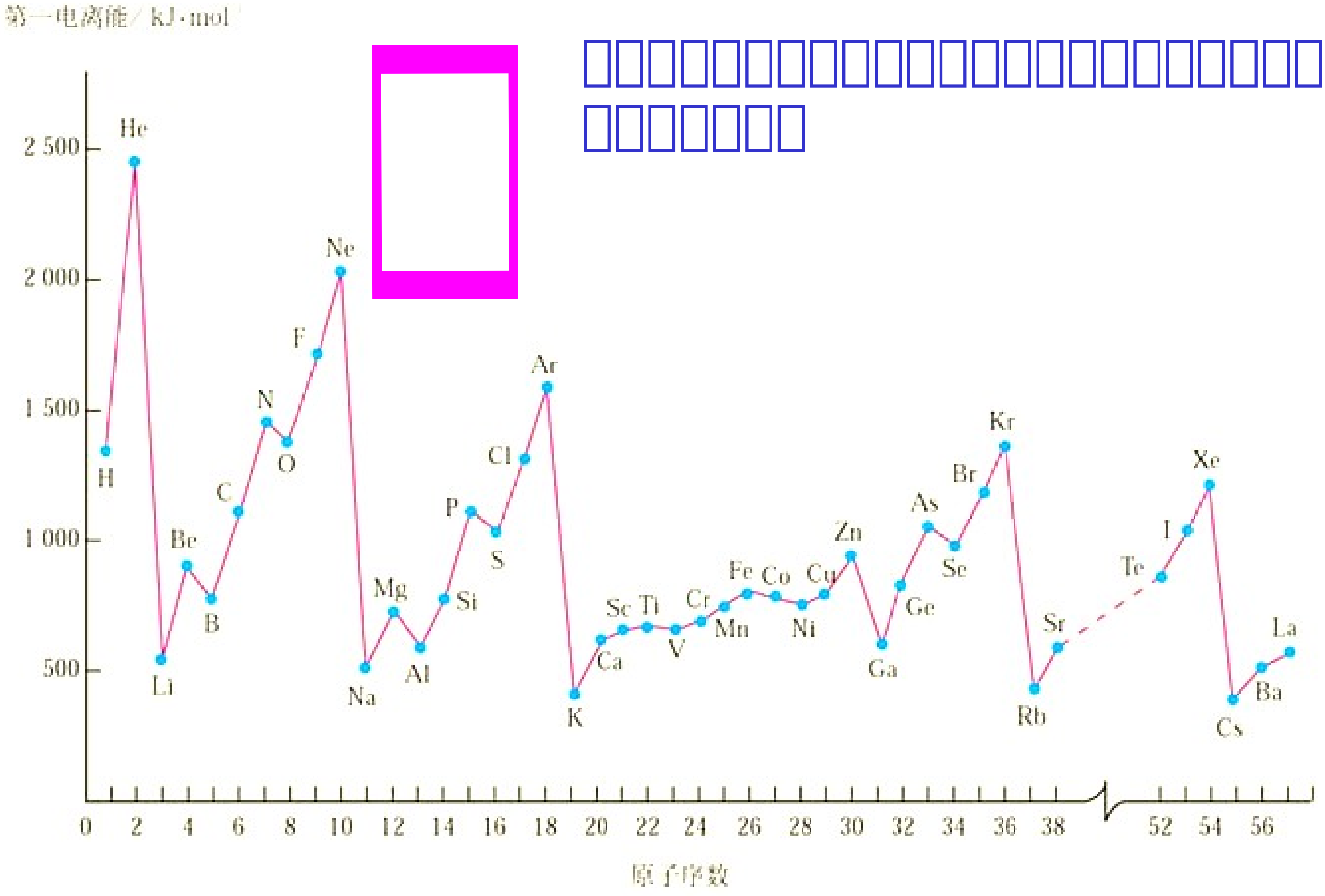
[illegible] I_1 [illegible] kJ/mol

+1 [illegible] I_2 [illegible]

[illegible] $I_1<I_2<I_3<$…… [illegible]

[illegible]

[illegible]



第一电离能/ kJ·mol
2 500
2 000
1 500
1 000
500
H He Li Be B C N O F Ne
Na Mg Al Si P S Cl Ar
K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr
Rb Sr Te I Xe Cs Ba La
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 52 54 56
原子序数

[illegible]2[illegible]

① [illegible]

a [illegible]

b [illegible]Ⅱ A [illegible] >ⅢA [illegible]Ⅴ A [illegible] >ⅥA [illegible]

[illegible]Ⅱ A [illegible]Ⅴ A [illegible]

ⅡA [illegible]Ⅴ A [illegible]

② [illegible]

[illegible]. [illegible] I_1 [illegible] B [illegible] N [illegible] ______Be [illegible] C [illegible] O______

1.

2.P_{18}

(1) □□□□□□□□□□□□□□□ (I_1) □□□□□

______________________ (□□□□□□□) □

(2)Na □□□□□□□□□ ________ □□□□□□□□□□□□□□□□□□

________ □ ________ □

(3)F □ Cl □ Br □ I □□□□□□□□□□□□□□□

__________________________ □□□□□□□□□□□□□

________________ □

□□　(1)Na □ Al □ Mg □ Si □ S □ P □ Cl □ Ar

(2)2　$I_2 \gg I_1$　$I_{10} \gg I_9$

(3)F □ Cl □ Br □ I　F □ Cl □ Br □ I

(4)[2016· □□□Ⅱ□ 37(3) □□] □□□□□□□□□□□□□□□ I_{Cu} □

1 958 kJ·mol^{-1} □ I_{Ni} □ 1 753 kJ·mol$^{□1}$ □ $I_{Cu} > I_{Ni}$ □□□

□ __________________

________ **□□□□□□□□□□ $3d^{10}$ □□□□□□□□□□ $4s^1$ □□** ________ □

5. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 1 [illegible]:

① [illegible]

② [illegible]

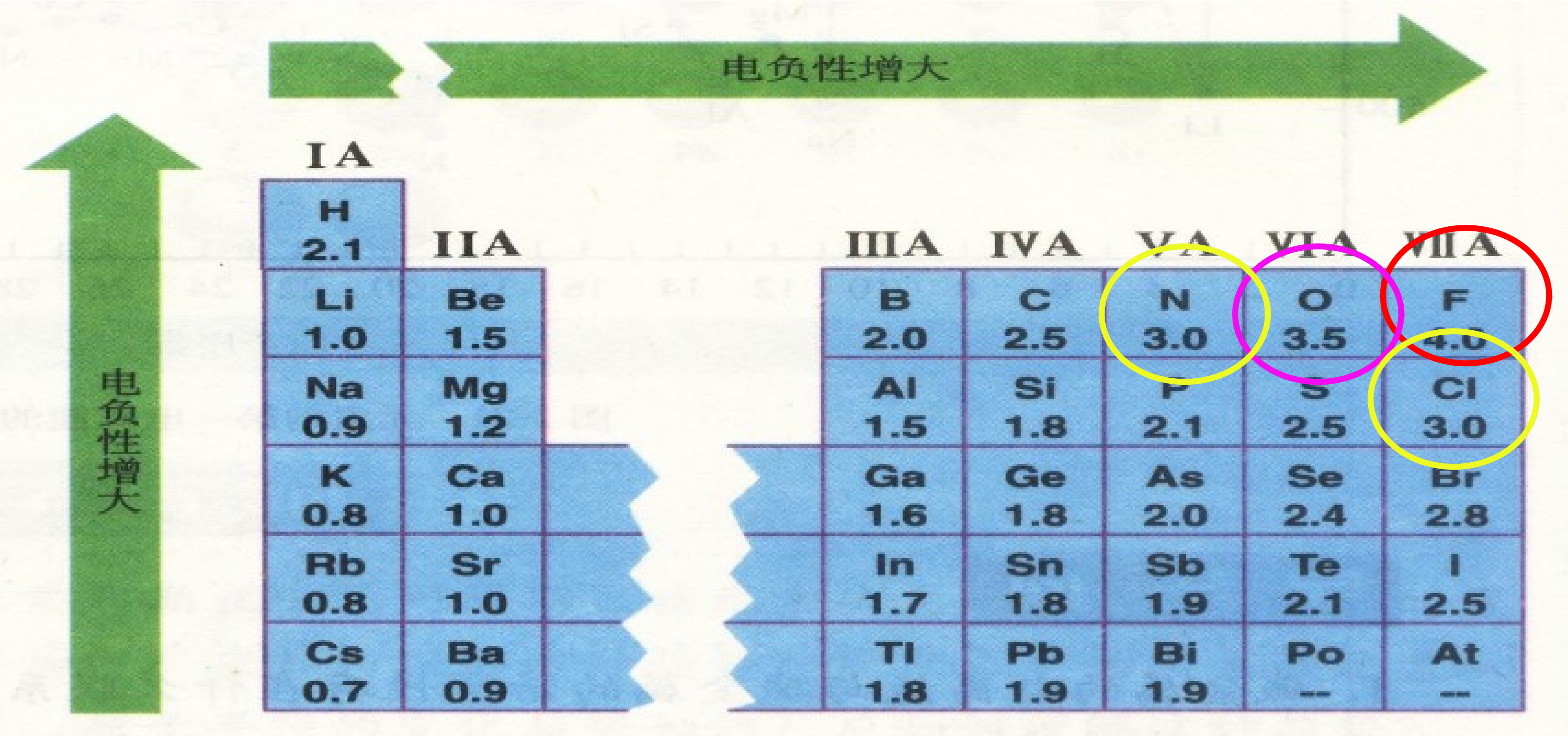


图 1-23　电负性的周期性变化

[illegible] **4.0** [illegible]

[illegible]2[illegible]

① [illegible]

[illegible] [illegible]1.8 [illegible]≈1.8

[illegible]1.8

② [illegible]

[illegible] >1.7 [illegible]

[illegible] <1.7 [illegible]

③ [illegible]

[illegible]:

CH_4 CCl_4 NaH

④ [illegible]“[illegible]”

[illegible]“[illegible]”[illegible]

Li	Be	B	
	Mg	Al	Si

a. [illegible] **Li** [illegible] **Li_2O** [illegible] **LiOH** [illegible]

b. $Be(OH)_2$ [illegible] **$Al(OH)_3$** [illegible] **$AlCl_3$** [illegible] **$BeCl_2$** [illegible]

c. H_3BO_3 [illegible] **H_2SiO_3** [illegible]

[illegible] 1 [illegible] （ C ）

A [illegible] $K^{+} > Ca^{2+} > Cl^{-} > S^{2-}$

B [illegible] $Ca^{2+} > K^{+} > S^{2-} > Cl^{-}$

C [illegible] $Ca^{2+} < K^{+} < Cl^{-} < S^{2-}$

D [illegible] $S^{2-} < Cl^{-} < K^{+} < Ca^{2+}$

2 [illegible] A [illegible]

A [illegible]

B [illegible]

C [illegible]

D [illegible]

[illegible]2020[illegible]I[illegible]35.[illegible]2[illegible]Li[illegible]

[illegible]I_1[illegible]$I_1(\mathrm{Li}) > I_1(\mathrm{Na})$[illegible]________[illegible]$I_1(\mathrm{Be}) >$

$I_1(\mathrm{B}) > I_1(\mathrm{Li})$[illegible]________[illegible]

①Na[illegible]Li[illegible]Na[illegible]

②Li[illegible]Be[illegible]B[illegible]Be[illegible]$1s^22s^2$[illegible]

[illegible]Li[illegible]B[illegible]

[illegible]

[illegible]2020[illegible]III[illegible]1[illegible]H[illegible]B[illegible]N[illegible]

________[illegible]B[illegible]________[illegible]

[illegible]3[illegible]NH_3BH_3[illegible]N[illegible]H[illegible]$H^{\delta+}$[illegible]

B[illegible]H[illegible]$H^{\delta-}$[illegible]____________[illegible]

[illegible]1[illegible]B Si[illegible]

[illegible]3[illegible]N[illegible]H[illegible]B

□2019 □□□ I □

（1）下列状态的镁中，电离最外层一个电子所需能量最大的是____________(填标号)。

□2019 □□ II □35. □3 □□□□□□□□ F^-______□□______O^{2-} □□“□□”□□”□“□□”□□

□2019 □□ III □35. □1 □□□□□□□□ Li □□□□□□□□□□□□ □□ __________ □□□□□□□□□□□ M □□□□□□□□□□ __________ □□ “□□”□“□□”□□

(1). Mg (2).
□□

□2018□□I□35.□2□Li^+□H^-□□□□□□□□

□□ ***r*(Li⁺)** □□ $r(H^-)$ □□□□ ____**Li⁺** □□□□□□__________________

____

□2018□□II□35.□2□□□□□□□□□□□□□□□□□□□Zn□

Cu□□□

□□□□□ I_1□Zn□______I_1□Cu)(□“□□”□“□□”)□□□________

____________________□

□□□

Zn □□□□□□□□□□□□□□□□□□□